



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Georgios B. Giannakis;

Confirmation No.

1066

Liuqing Yang

Serial No.:

10/796,567

Filed:

March 8, 2004

Customer No.:

28863

Examiner:

Unknown

Group Art Unit:

2631

Docket No.:

1008-015US01

Title:

TIMING SYNCHRONIZATION USING DIRTY TEMPLATES IN ULTRA

WIDEBAND (UWB) COMMUNICATIONS

CERTIFICATE UNDER 37 CFR 1.8: I hereby certify that this correspondence is being deposited with the United States Post Service, as First Class Mail, in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 on September 24, 2004.

Name: Beth M. Lindblom

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents Alexandria, VA 22313-1450

Dear Sir:

Applicant submits the references listed on the attached form PTO-1449. This statement is being filed, to the best of Applicant's knowledge, before the receipt of a first Office Action on the merits.

Applicant has enclosed copies of each article cited and each foreign document cited.

Respectfully submitted,

Date: September 24, 2004

By: Kent J. Sieffert Reg. No.: 41,312

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Phone: (651) 735-1100 Fax: (651) 735-1102 Form 1449* Docket Number: Application Number: 1008-015US01 10/796,567 **INFORM** Applicant: Georgios B. Giannakis; Liuqing Yang IN AN APPLICATION Filing Date: Group Art Unit: (Use several sheets if necessary) March 8, 2004 2631 Examiner Name: Unknown U.S. PATENT DOCUMENTS Filing Date If Examiner **Document Number** Issue/Document Name Appropriate **Publication Date** Initial FOREIGN PATENT DOCUMENTS Examiner **Document Number Publication** Translation Country Date Yes Initial OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication) Z. Wang et al., "Block Precoding for MUI/ISI-Resilient Generalized Multicarrier CDMA with Multirate Capabilities," IEEE Transactions on Communications, Vol. 49, no. 11, pp. 2016-2027, November 2001. F. Ramirez-Mireles et al., "System Performance Analysis of Impulse Radio Modulation," Procedings Radio Wireless Conference, Colorado Springs, CO, pp. 67-70, August 1998. M. Win et al., "Ultra-Wide Bandwidth Time-Hopping Spread-Spectrum Impulse Radio for Wireless Multiple-Access Communications," IEEE Transactions on Communications, Vol. 48, No. 4, pp. 679-691, April 2000. A. Saleh et al., "A Statistical Model for Indoor Multipath Propagation," IEEE Journal on Selected Areas in Communications, Vol. SAC-5, No. 2, pp. 128-137, February, 1987. B. Hassibi et al., "On the Expected Complexity of Sphere Decoding," Proceedings of the Asilomar Conference on Signals, Systems and Computers, Vol. 2, pp. 1051-1055, 2001. B. Hochwald et al., "Unitary Space-Time Modulation for Multiple-Antenna Communications in Rayleigh Flat Fading," IEEE Transactions on Information Theory, Vol. 46, No. 2, pp. 543-564, March 2000. C. Le Martret et al., "All-Digital PPM Impulse Radio for Multiple-Access Through Frequency-Selective Multipath," Procedures of GLOBECOM, Vol. 1, pp. 22-26, San Francisco, CA, November 17 – December 1, 2000.

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